APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,913	12/01/2003	Takayuki Kinoshita	JP920020209US1	3308

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EXAMINER
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ART UNIT	PAPER NUMBER
2621	

NOTIFICATION DATE	DELIVERY MODE
10/29/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 December 2008</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>6,15 and 17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>6, 15 and 17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12/08/2009 have been considered but are moot in

view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent
Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV,
reads as follows:

Claims that recite nothing but the physical characteristics of a form of energy, such as a
frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se,
and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14.
Moreover, it does not appear that a claim reciting a signal encoded with functional
descriptive material falls within any of the categories of patentable subject matter set forth in
Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

.... signal claims are ineligible for patent protection because they do not fall within any of the
four statutory classes of Sec. 101.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter as follows.

Claim 17 recites "a computer-readable medium encoded with a software program

for controlling a computer ..." However, the recited "recording medium" could be

reasonably interpreted as encompassing statutory media such as a "ROM", "RAM",

"EPROM", "CD-ROM", etc, as well as non-statutory subject matter such as a magnetic,

optical, electromagnetic, infrared, … or propagation medium.

A "magnetic, optical, electromagnetic, infrared, … or propagation medium" is

neither a process nor a product, (i.e., a tangible "thing") and therefore does not fall

within one of the four statutory classes of § 101. Rather, a "magnetic, optical,

electromagnetic, infrared, … or propagation medium" is a form of energy, in the

absence of any physical structure or tangible material.

The Examiner suggests amending the claim to recite the "computer-readable

recording medium" as "computer-readable non-transitory recording medium" to include

tangible computer readable media, while at the same time excluding the intangible

media such as signals, carrier waves, etc. Any amendment to the claim should be

commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Morohoshi et al. (US Patent 7,206,496 – hereinafter Morohoshi), Noda et al.

(US Patent 7,003,711 – hereinafter Noda), and Dobbek et al. (US Patent 6,219,198 –

hereinafter Dobbek).

Regarding claim 6, Morohoshi content reproducing apparatus for reading and reproducing a digital content that requires sequential reproduction and is recorded in a disk-shaped recording medium in a hard disk drive *(column 1, lines 41-45)*, comprising: a logical head position estimating means for estimating a present position of a logical head with respect to a single file on the recording medium for reading the single file of the digital content *(column 3, lines 48-52)*; data position calculating means for calculating a position of a data block for a digital content to be read next in chronological sequence in the single file *(column 4, lines 1-35 – wherein the data block for a digital content to be read next is the data that is currently pointed to the present position of the pointer)*, and chronological sequential positions of other data blocks existing sequentially before and sequentially after the data block in the single file *(column 4, lines 20-22 – wherein the chronological sequential positions of other data blocks existing sequentially before and sequentially after the data block are calculated in order to determine whether the present position of the pointer Pt is within the range of the current block. The calculating process is performed via index information and block size information described in column 4, lines 1-7 and further illustrated in Fig. 2)*; moving destination determining means for determining a data block, as a data block to be read next in chronological sequence, based on the present position of the logical head, which has been estimated by the logical head position estimating means, and the chronological sequential positions of the respective data blocks, which have been calculated by the data position calculating means *(column 4, lines 1-35; column 5, lines 10-47)*.

However, Morohoshi does not disclose the head position estimating means measures a time taken to execute a command for reading the data block and reflects the result of measurement on estimation of the position of the head; moving destination determining means for determining a data block at which the time required to move the head is the shortest, as a data block to be read next in chronological sequence, based on the present position of the head, which has been estimated by the head position estimating means, and the chronological sequential positions of the respective data blocks, which have been calculated by the data position calculating means; and wherein the moving destination determining means determines, based on a rotation latency necessary for the head to move on a track having predetermined data existing thereon and then for the recording medium to rotate to thereby cause the data to reach the position of the head, a time required to move the head to the chronological sequential position of the corresponding data block.

Dobbek discloses a head position estimating means measures a time taken to execute a command for reading the data block and reflects the result of measurement on estimation of the positions of the head *(column 11, lines 34-43)*.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the head position estimating means disclosed by Dobbek into the apparatus disclosed by Morohoshi in order to implement a physical head to read data with respect to the recording medium that realizes the logical head with respect to a file recorded on the recording medium as discussed above. The

incorporated feature is necessary to physically read data recorded on the recording medium.

However, Morohoshi and Dobbek do not disclose the moving destination determining means for determining the time required to move the head is the shortest; and wherein the moving destination determining means determines, based on a rotation latency necessary for the head to move on a track having predetermined data existing thereon and then for the recording medium to rotate to thereby cause the data to reach the position of the head, a time required to move the head to the chronological sequential position of the corresponding data block.

Noda discloses moving destination determining means for the time required to move the head is the shortest *(column 11, lines 52-58)*; and wherein the moving destination determining means determines, based on a rotation latency necessary for the head to move on a track having predetermined data existing thereon and then for the recording medium to rotate to thereby cause the data to reach the position of the head, a time required to move the head to the chronological sequential position of the corresponding data block *(column 9, lines 40-45; column 11, lines 55-58)*.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Noda into the apparatus disclosed by Morohoshi and Dobbek in order to move the reading head to reach the target data block quickly, thus reducing access time.

Regarding claim 15, Morohoshi discloses a method of controlling a personal video recorder for reading and reproducing a digital video content recorded in a disk-

shaped recording medium in a hard disk drive *(column 1, lines 41-45),* comprising:
estimating the present position with respect to a file recorded on the recording medium,
of a logical head for reading the digital video content *(column 3, lines 48-52);* calculating
a position of a data block for the digital video content to be read next *(column 4, lines 1-
35 – wherein the data block for a digital content to be read next is the data that is
currently pointed to the present position of the pointer),* and positions of other data
blocks existing before and alter the data block for rewind and fast operations,
respectively, for displaying the digital video content on the personal video recorder
*(column 3, lines 23-27; column 4, lines 20-22 – wherein the chronological sequential
positions of other data blocks existing sequentially before and sequentially after the data
block are calculated in order to determine whether the present position of the pointer Pt
is within the range of the current block. The calculating process is performed via index
information and block size information described in column 4, lines 1-7 and further
illustrated in Fig. 2);* calculating a target position to move the logical head, based on the
estimated present position of logical head and the positions of the respective data
blocks *(column 4, lines 1-35; column 5, lines 10-47);* and reading a data block at the
target position *(column 4, lines 1-35; column 5, lines 10-47).*

 However, Morohoshi does not disclose wherein a time taken to execute a
command for reading the digital video content is measured, and the result of
measurement is reflected on estimation of the position of the head; calculating a time
required to move the head to the target position; and reading a data block at which the
calculated time required to move the head is the shortest.

Dobbek discloses a time taken to execute a command for reading the data is measured and the result of measurement is reflected on estimation of the position of the head *(column 11, lines 34-43)*.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the head position estimating means disclosed by Dobbek into the method disclosed by Morohoshi in order to implement a physical head to read data with respect to the recording medium that realizes the logical head with respect to a file recorded on the recording medium as discussed above. The incorporated feature is necessary to physically read data recorded on the recording medium.

However, Morohoshi and Dobbek do not disclose calculating a time required to move the head to the target position; and reading a data block at which the calculated time required to move the head is the shortest.

Noda discloses moving calculating a time required to move the head to the target position *(column 11, lines 52-58)*; and reading a data block at which the calculated time required to move the head is the shortest *(column 9, lines 40-45; column 11, lines 52-58)*.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Noda into the method disclosed by Morohoshi and Dobbek in order to move the reading head to reach the target data block quickly, thus reducing access time.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Morohoshi et al. (US Patent 7,206,496 – hereinafter Morohoshi) and Noda et al.

(US Patent 7,003,711 – hereinafter Noda).

Regarding claim 17, Morohoshi discloses a computer-readable medium encoded

with a software program for controlling a computer and performing control for reading

and reproducing a digital video content recorded in a disk-shaped recording medium in

a hard disk drive *(column 1, lines 41-45)*, for allowing the computer to execute the

following processes: a process for estimating the present position with respect to a

single file recorded on the recording medium, of a logical head for reading the single file

of the digital video content *(column 3, lines 48-52)*; a process for calculating

chronological sequential positions of a data block for the digital video content to be read

next in the single file, and other data blocks existing sequentially before and

sequentially after the data block in the single file for rewind and fast operations,

respectively *(column 3, lines 23-27; column 4, lines 20-22 – wherein the chronological*

sequential positions of other data blocks existing sequentially before and sequentially

after the data block are calculated in order to determine whether the present position of

the pointer Pt is within the range of the current block. The calculating process is

performed via index information and block size information described in column 4, lines

1-7 and further illustrated in Fig. 2); a process for calculating a target position to move

the head, based on the estimated present position of the head and the chronological

sequential positions of the respective data blocks in the single file *(column 4, lines 1-35;*

column 5, lines 10-47); and a process for reading a data at the calculated target position
(column 4, lines 1-35; column 5, lines 10-47).

However, Morohoshi does not disclose a process for calculating a time required
to move the head to the target position; and a process for reading the data block at the
target position at which the calculated time required to move the head is the shortest.

Noda discloses a process for calculating a time required to move the head to a
target position *(column 11, lines 52-58);* and a process for reading the data block at the
target position at which the calculated time required to move the head is the shortest
(column 9, lines 40-45; column 11, lines 52-58).

One of ordinary skill in the art at the time the invention was made would have
been motivated to incorporate the teachings of Noda into the teachings disclosed by
Morohoshi in order to move the reading head to reach the target data block quickly, thus
reducing access time.

Conclusion

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Hung Q. Dang whose telephone number is (571)270-
1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number
for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621